

CLAIMS

1. A device for determining a reaching of a preset drill hole depth in a drill hole which is drilled by a drilling tool of a drilling apparatus from a workpiece surface in a workpiece, the device comprising a measuring means which is mountable on and dismountable from the drilling apparatus for contactless measurement of an initial distance when a tip of the drilling tool abuts against the workpiece surface; and means for computing an instantaneous distance to the workpiece surface as well as computing by a computing and comparing circuit a drilling progress from the measured initial distance and a measured instantaneous distance, and comparing the drilling progress with a preset drill hole depth.

2. A device as defined in claim 1, wherein said measuring means has an emitter and a receiver for wave signals, and an evaluation circuit for evaluation of wave signals emitted by said emitter to the workpiece surface and reflected from the workpiece surface to said receiver.

3. A device as defined in claim 1; and further comprising input means for setting a desired drill hole depth.

4. A device as defined in claim 1; and further comprising a storage for intermediately storing a parameter selected from the group consisting of the set drill hole depth and the measured initial distance.

5. A device as defined in claim 1; and further comprising indicating means for indicating a parameter selected from the group consisting of the preset drill hole depth, the drilling progress, and the reaching of the preset drilling hole depth.

6. A device as defined in claim 5, wherein said indicating means includes a plurality of light diodes.

7. A device as defined in claim 1, wherein said indicating means includes a numerical indicator.

8. A device as defined in claim 1, wherein said measuring means includes an energy source which is separate from an energy source of the drilling apparatus.

9. A device as defined in claim 1, wherein said measuring means during mounting on the drilling apparatus is connectable to an energy source of the latter.

10. A drilling apparatus, comprising a drilling tool; and a device for determining a reaching of a preset drill hole depth in a borehole which is drilled by said drilling tool from a workpiece surface in a workpiece, said

device including measuring means which is mountable on and dismountable from the drilling apparatus for contactless measurement of an initial distance when a tip of the drilling tool abuts against the workpiece surface, and means for computing an instantaneous distance to the workpiece surface as well as computing by a computing and comparing circuit a drilling progress from the measured initial distance and a measured instantaneous distance, and comparing the drilling progress with a preset drill hole depth.

11. A drilling apparatus as defined in claim 10, wherein said device is removable.

12. A drilling apparatus as defined in claim 10, wherein said drilling apparatus includes a drive motor; and further comprising an interruption switch located in a current circuit of said drive motor and controlled by said computing and comparing circuit.

13. A method of drilling, comprising the steps of drilling a drill hole in a workpiece from a workpiece surface with a drilling tool of a drilling apparatus; determining a reaching of a preset drill hole depth from the workpiece surface at the working apparatus; before the drilling of the borehole measuring an initial distance at which a tip of the drilling tool abuts against the workpiece surface, and during the drilling continuously contactlessly measuring an instantaneous distance from the drilling apparatus to the workpiece surface, continuously calculating a drilling progress from the measured initial distance and the measured instantaneous distance, and comparing the calculated drilling progress with a preset drill hole depth.

14. A method as defined in claim 13; and further comprising indicating at least one parameter selected from the group consisting of the preset drill hole depth, the drilling progress and the reaching of the preset drilling hole depth on an indicator of the drilling apparatus.

15. A method as defined in claim 13; and further comprising indicating at least one parameter selected from the group consisting of the preset drill hole depth, the drilling progress and the reaching of the preset drilling hole depth on a device arranged on the drilling apparatus.

16. A method as defined in claim 13; and further comprising interrupting a current circuit of a drive motor of the drilling apparatus, upon reaching the preset drill hole depth.